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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,984

03/19/2004

Klaus Marx

R.304107

6911

2119

7590

02/03/2005

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EXAMINER

BELLAMY, TAMIKO D

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/803,984

Applicant(s)

MARX ET AL.

BM

Examiner

Tamiko D. Bellamy

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2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 8-11, and 15 are rejected under 35 U.S.C. 102(b) as being unpatentable over Nakayama et al. (JP 07243896A).

Re to claim 1, Nakayama et al. discloses in fig. 4, an acoustic guide conduit (e.g., spiral tube 17) in a container (11) with at least one ultrasonic transducer (e.g., sound wave transducer 13) close to the end of acoustic guide conduit (e.g., spiral tube 17) for generating/receiving pulses reflected in a region of the fluid level (e.g. surface 22) in the container (11). As depicted in fig. 4, Nakayama et al. discloses the acoustic guide conduit (e.g., spiral tube (17)) comprises a horizontal or inclined approach region disclosed closes to the bottom of the container (11). It is noted that the intended use is for a tank for a motor vehicle does not afford patentable weight. The court Held, In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); In re Yanush, 477 F.2d 958, 177 USPQ 705 (CCPA 1973); In re Finsterwalder, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963); Ex parte Masham, 2 USPQ2d 1647 (BdPatApp & Inter 1987), that the recitation with respect to the manner in which an apparatus is intended to be employed does not impose any structural limitation upon the claimed

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apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim.

Re to claim 4, as depicted in fig. 4, Nakayama et al. discloses an acoustic guide conduit (e.g., spiral tube 17) in a container (11) with at least one ultrasonic transducer (e.g., sound wave transducer 13) close to the end of acoustic guide conduit (e.g., spiral tube 17) for generating/receiving pulses reflected in a region of the fluid level (e.g. surface 22) in the container (11). As depicted in fig. 4, Nakayama et al. discloses the acoustic guide conduit (e.g., spiral tube 17)) comprises a bend with a deflection and/or a straight region with a conduit slope angle. It is noted that the intended use is for a tank for a motor vehicle does not afford patentable weight. The court Held, In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); In re Yanush, 477 F.2d 958, 177 USPQ 705 (CCPA 1973); In re Finsterwalder, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963); Ex parte Masham, 2 USPQ2d 1647 (BdPatApp & Inter 1987), that the recitation with respect to the manner in which an apparatus is intended to be employed does not impose any structural limitation upon the claimed apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim.

Re to claims 8 and 9, as depicted in fig. 4, Nakayama et al. discloses an ultrasonic transducer (e.g., sound wave transducer 13) inside of container (11).

Re to claims 10 and 11, Nakayama et al. discloses an ultrasonic transducer (e.g., sound wave transducer 13) that transmits and receives a reflected signal.

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Re to claim 15, Nakayama et al. discloses water flows into the acoustic guide conduit (e.g., spiral tube 17) to the same height as the water level (22). The acoustic guide conduit (e.g., spiral tube 17) inherently contains openings (par.23).

3. Claims 1, 2, 4, 8-11, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Dyke (5,172,594).

Re to claim 1, Dyke discloses in figs. 1 and 4, an acoustic guide conduit (e.g., combination of a still well (20), and a guide conduit (28)) in a container (e.g., tank sidewall 12) with at least one ultrasonic transducer (e.g., transducer assembly 18) close to the end of acoustic guide conduit (28) for generating/receiving pulses reflected in a region of the fluid level (24) in the container (e.g., tank sidewall 12). As depicted in fig. 1, Dyke discloses the acoustic guide conduit (e.g., combination of a still well (20), and a guide conduit (28)) comprises a horizontal or inclined approach region disclosed closes to the bottom (e.g., floor 14) of the container (e.g. tank side wall 12). It is noted that the intended use is for a tank for a motor vehicle does not afford patentable weight. The court Held, In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); In re Yanush, 477 F.2d 958, 177 USPQ 705 (CCPA 1973); In re Finsterwalder, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963); Ex parte Masham, 2 USPQ2d 1647 (BdPatApp & Inter 1987), that the recitation with respect to the manner in which an apparatus is intended to be employed does not impose any structural limitation upon the claimed apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim.

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Re to claim 2, as depicted in fig. 1, Dyke discloses that a portion of the approach region extends in a straight line.

Re to claim 4, Dyke discloses an acoustic guide conduit (e.g., combination of a still well (20), and a guide conduit (28)) in a container (e.g., tank side wall 12) with at least one ultrasonic transducer (e.g., transducer assembly 18) close to the end of acoustic guide conduit (18) for generating/receiving pulses reflected in a region of the fluid level (e.g. surface 22) in the container (11). As depicted in fig. 4, Dyke discloses the acoustic guide conduit (18) comprises a bend with a deflection and/or a straight region with a conduit slope angle. It is noted that the intended use is for a tank for a motor vehicle does not afford patentable weight. The court Held, In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); In re Yanush, 477 F.2d 958, 177 USPQ 705 (CCPA 1973); In re Finsterwalder, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963); Ex parte Masham, 2 USPQ2d 1647 (BdPatApp & Inter 1987), that the recitation with respect to the manner in which an apparatus is intended to be employed does not impose any structural limitation upon the claimed apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim.

Re to claims 8 and 9, Dyke discloses a transducer (18) on the inside of a container (e.g., tank side wall 12).

Re to claims 10 and 11, Dyke discloses that the transducer transmits and receives signals (col. 2, lines 26-30).

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Re to claims 14 and 15, Dyke discloses an acoustic guide conduit (e.g., combination of a still well (20), and a guide conduit (28)) in a container (e.g., tank sidewall 12) having openings (col. 2, lines 36-40).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dyke (5,172,594) in view of Sato et al. (JP 05273033A).

Re to claims 3 and 5, as depicted in fig. 4, Dyke discloses a transducer (18) inserted inside of an acoustic guide conduit (e.g., combination of a still well (20), and a guide conduit (28)). Dyke lacks the detail of the ultrasonic transducer disposed on a sidewall of a container. As depicted in fig. 7, Sato et al. discloses an ultrasonic transducer (21) on a portion of a side wall (50c) and a bottom of the container (10). Therefore, to modify Dyke by employing an ultrasonic transducer on a side wall or bottom of a container would have been obvious to one of ordinary skill in the art at the time of the invention since Sato et al. teaches a level measuring apparatus having these design characteristics. The skilled artisan would be motivated to combine the teachings of Dyke and Sato et al. since Dyke states that his invention is applicable to measuring the liquid level of a tank using ultrasonic transducer coupled to a waveguide and Sato et al. is

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directed to a liquid level measuring apparatus using an ultrasonic transducer coupled to a waveguide.

Re to claims 6 and 7, as depicted in fig. 4, Dyke discloses a transducer (18) inserted inside of an acoustic guide conduit (e.g., combination of a still well (20), and a guide conduit (28)). Dyke lacks the detail of the ultrasonic transducer disposed on the outside of a container. As depicted in fig. 7, Sato et al. discloses an ultrasonic transducer (21) on the outside of the container (10). Therefore, to modify Dyke by employing an ultrasonic transducer on the outside of a container would have been obvious to one of ordinary skill in the art at the time of the invention since Sato et al. teaches a level measuring apparatus having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Dyke and Sato et al. since Dyke states that his invention is applicable to measuring the liquid level of a tank using ultrasonic transducer coupled to a waveguide and Sato et al. is directed to a liquid level measuring apparatus using an ultrasonic transducer coupled to a waveguide.

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dyke (5,172,594) in view of Stapleton et al. (5,085,077).

Re to claims 12 and 13, Dyke discloses an acoustic guide conduit (e.g., combination of a still well (20), and a guide conduit (28)). Dyke lacks the detail of acoustic guide conduit having at least one reference reflection surface. Stapleton et al. discloses an acoustic guide conduit (e.g., fill pipe 30) having a reference reflection surface (e.g., reference reflector 25). Therefore, to modify Dyke by employing reference reflection surface would have been obvious to one of ordinary skill in the art at the time of the invention since Stapleton et al. teaches an ultrasonic liquid measuring device having theses design characteristics. The skilled artisan would be



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motivated to combine the teachings of Dyke and Stapleton et al. since Dyke states that his invention is applicable to measuring the liquid level of a tank using ultrasonic transducer coupled to a waveguide and Stapleton et al. is directed to a liquid level measuring apparatus using an ultrasonic transducer coupled to a waveguide.

*Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 6:30 AM to 3:30 PM.

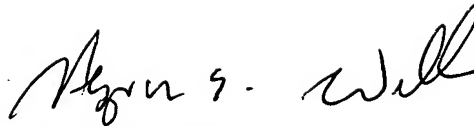
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamiko Bellamy

T.B.  
January 31, 2005

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A handwritten signature in black ink, appearing to read "Hezron Williams", with a long horizontal line extending to the right.

HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800